



UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS EAST-MARINE CORPS BASE
PSC BOX 20005
CAMP LEJEUNE NC 28542-0005

MCIEAST-MCB CAMLEJO 5090.5
G-F/BEMD
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MARINE CORPS INSTALLATIONS EAST-MARINE CORPS BASE CAMP LEJEUNE ORDER
5090.5

From: Commanding General
To: Distribution List

Subj: GREASE CONTROL PROGRAM

Ref: (a) Article 21 of Chapter 143, General Statutes of North
Carolina as amended
(b) National Environmental Policy Act (NEPA) of 1969, 42 U.S.C.
§ 4321 *et seq.*

1. Situation

a. The Marine Corps Installations East-Marine Corps Base, Camp Lejeune (MCIEAST-MCB CAMLEJ) Grease Control Program policy was developed to comply with all applicable local, state, and Federal regulations pertaining to the operation and management of the wastewater treatment system. This program outlines the best management practices advocated by MCIEAST-MCB CAMLEJ and has the potential to provide significant benefits through cost avoidance, improved environmental management, and enhanced operational capabilities.

b. Fats, oils, and greases (FOG), liquefy under the high temperature conditions associated with cooking and cleaning dishes. FOG can come from butter, lard, meats, nuts, vegetable fats and oils, and is found on pots, pans, grills, and in deep fat fryers. FOG coats pipes and accumulates in the wastewater system.

c. Wastewater systems were not designed to handle FOG accumulation. FOG that stays in the pipes can cause blockages, which may lead to sewer backups. FOG that makes it to the wastewater treatment facilities increases the biological and chemical oxygen demands, which leads to higher wastewater treatment costs and lower efficiency. Sewer backups and increased costs incurred by FOG in wastewater systems are completely preventable.

d. The requirements provided in this Order establish the goals and policies of the Grease Control Program and are applicable to all organizations aboard MCB CAMLEJ and Marine Corps Air Station (MCAS), New River, hereafter referred to as the Installation, to include: any command, activity, reserve component, contractor working aboard the Installation, staff organization, or supporting agency which are affiliated with the United States Marine Corps, Department of the Navy (DoN), or Department of Defense. This Order also applies to all

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tenant commands and those in transit or otherwise temporarily resident because of training or mobilization commitments.

e. Additionally, this Order outlines the procedures to be implemented by all new and existing non-residential food preparation facilities located aboard the Installation and will be instituted by all area commanders that oversee and are involved with the construction, operation, and maintenance of facilities that generate and/or work with any FOG. Personnel subject to these guidelines include, but are not limited to, any civilian or military member who handle, butcher, wrap, serve, or otherwise work in association with food in facilities such as mess halls, restaurants, snack bars, cooking schools, or any other potential FOG generator.

f. Handling techniques and additional information for ensuring proper FOG management are as follows:

(1) Proper FOG Handling Techniques

(a) The Installation prohibits the intentional release of FOG into the wastewater system. Under no circumstance should FOG be poured, scraped, or otherwise disposed into sinks, toilets, or any other wastewater system constituent.

(b) Grease traps (also called grease interceptors and grease separation devices) are used by the Installation to help control the amount of incidental FOG that enters the wastewater system. Grease traps were designed to allow wastewater to pass through while capturing FOG. Grease traps cannot remove large amounts of FOG. Therefore, it is essential that all activities properly dispose of FOG using the proper FOG handling techniques discussed in paragraph 1f(1)(a) and 1f(1)(d).

(c) The best way to manage FOG is to keep it out of the waste water system. All fryer oil should be collected in the FOG rendering tank. FOG spilled under fryer baskets should be soaked up with food grade paper and disposed of in the trash can. Work areas should be wiped down with paper towels. Cloth towels should not be used as grease will enter the wastewater system when the towel is washed.

(d) A large portion of the FOG in the wastewater system originates from dishwashing and clean-up activities at food preparation facilities. The majority of this FOG comes from the sink or sink base. All FOG should be scraped off cooking supplies and equipment, including cookware, utensils, dishes, and other serving ware, and disposed of in the proper container, such as a rendering tank or trash can. FOG rendering tanks are typically supplied by the disposal contractor and consist of a 55-gallon container with a clamp-

on type cover. Do not dispose of scrapings in the sink, toilet, floor drain, or any other component of the wastewater system.

(2) Types of FOG. FOG will occur in any combination of four forms: free, mechanically emulsified, chemically emulsified, and dissolved. The combinations of FOG directly affect the efficiency of grease traps.

(a) Free oil FOG will float on top of water as a liquid. This oil accounts for the majority of the FOG used in a food service facility. A grease trap can effectively remove free oil, if the flow rate of the system is slow enough to allow efficient separation.

(b) Mechanically Emulsified FOG typically occurs when an oil and water mixture is agitated and the oil is separated into small droplets. If given enough time, these droplets will float on top of the water. However, a grease trap cannot effectively remove mechanically emulsified FOG, as it does not allow enough time for the droplets to float to the top of the water.

(c) Chemically Emulsified and dissolved FOG occurs when oil has been broken down by chemicals, such as cleaning agents and degreasing compounds, into very small particles that will not float on the water surface. These types of FOG will not separate from the water and cannot be effectively removed by grease traps.

(3) Grease Trap Location and Use

(a) To effectively remove FOG, grease traps must be properly sized, constructed and installed in the correct location. All grease-bearing drains, such as mop sinks, wash sinks, prep sinks, utility sinks, dishwashers, pre-rinse sinks, and floor drains in food preparation areas should discharge to a grease trap. A toilet or clothes washing machine should not be plumbed to a grease trap.

(b) It is essential that only grease-laden wastewater be permitted to enter the grease trap. Suspended solids, such as sugar, starches, and other non-FOG food items will accumulate in the grease trap and reduce its efficiency. Solid waste items, such as straws, napkins, and mop strings, can cause blockages in the system. Under no circumstances should waste strainers be removed from, and/or solid waste disposed into, the grease trap.

(4) Bioaugmentation

(a) Biological agents and/or enzymes are added to grease traps to increase their efficiency. This process, called bioaugmentation, is sensitive to chemical changes in the wastewater system. While the system can handle small, diluted amounts of detergent and cleaning products (such as bleach or pine oil), certain

chemicals are known to disrupt the bioaugmentation system. The Public Works Office must approve all detergents and cleaning products that are ultimately discharged to the wastewater system.

(b) Grease traps and bioaugmentation plans are based on estimates of the peak and average daily water flow and FOG concentrations. Unusually high water flows and FOG concentrations associated with hood cleaning and special events cannot be properly processed by the system.

g. FOG Training and Education

(1) Public awareness is essential to any Grease Control Program. The Installation will maintain an educational and enforcement program that emphasizes proper food handling techniques and requires the proper operation and maintenance of any grease trap connected to the wastewater system. All public awareness efforts must be documented and records shall be kept on file for a minimum of three years, in accordance with reference (a), and must be available for inspection.

(2) The Installation recognizes that food service establishments typically have limited time and resources available for activities other than food preparation. Furthermore, personnel turnover may be high and the facility may be unaware of the environmental aspects of their activities. However, it is critical that FOG is kept from the wastewater system. Therefore, all existing and new non-residential establishments that work with FOGs must establish and maintain a grease control-training program.

(3) At a minimum, FOG training will establish waste awareness by informing all new and current employees of food waste impacts on the wastewater system and proper food waste handling techniques. This training will be given to all new employees prior to handling food. All employees must receive yearly refresher training on FOG impacts and proper handling techniques, including any new developments in FOG disposal. All training efforts must be documented and training records shall be kept on file for a minimum of three years, in accordance with reference (a), and must be available for inspection.

(4) Facility supervisors are critical to the Grease Control Program's success. Supervisors are responsible for maintaining employee awareness of, and compliance with, this program. The level of commitment by supervisors can be directly correlated to the achievements of the program. Therefore, supervisors are strongly encouraged to attend more frequent training on FOG best management practices. Please note that supervisors will be held accountable for all FOG violations at their facility.

h. Reference (a) requires wastewater treatment systems to obtain

a Collection System Permit. The Permit contains performance standards, operation and maintenance requirements, inspection requirements and record keeping, and monitoring and reporting requirements. The Installation's Collection System Permit mandates the best management practices outlined in this Order. Failure to comply with this Grease Control Program can result in the assessment of civil penalties for wastewater violations.

2. Cancellation. BO 5090.5.

3. Mission. This Order assigns responsibilities and establishes policy, procedures, and guidelines to ensure the proper disposal of FOG in order to reduce negative impacts to the wastewater treatment system and ensure compliance with all state and Federal grease regulations and the references.

4. Execution

a. Commander's Intent and Concept of Operations

(1) Commander's Intent. As responsible stewards of the environment and government assets, MCIEAST-MCB CAMLEJ and MCAS New River has established this Order to enhance policies and assign responsibilities for grease control procedures in order to ensure a properly working wastewater treatment facility and compliance with all regulations regarding grease control.

(2) Concept of Operations. This Order shall be used to ensure the Installation is in compliance with the Marine Corps Grease Control Program and the references.

b. Subordinate Elements Missions

(1) Director, Public Works Officer (PWO)/Deputy PWO shall:

(a) Serve as Program Director and have overall responsibility for the execution of the Grease Control Program.

(b) Designate a Program Manager who shall:

1. Be responsible for maintaining compliance with the Grease Control Program on a daily basis. It is essential that the Program Manager maintain the necessary training to effectively manage this program.

2. Ensure inspections of grease traps at least once every 90 days.

3. Initiate, develop, and maintain a contract for grease maintenance and disposal.

a. Contractors who pump out grease traps aboard MCIEAST-MCB CAMLEJ must possess a permit to operate a Septage Land Application Site.

b. Upon completion of the required work, all jobs will be inspected. The maintenance job order will not be signed unless the work passes the inspection.

4. Maintain adequate records to accomplish the following:

a. Document that grease traps have been properly designed and installed.

b. Maintain a list of all approved detergents and cleaning products, including quantities and/or concentrations that may be discharged to the wastewater system.

c. Maintain work records in a supply and maintenance database. Work records will be available for inspection and include work performance dates, names of personnel involved, work description including results, and a waste manifest.

5. Ensure facilities notifies Environmental Management Division (EMD) at 451-5068 or PWO Branch at 451-3001, if any problems are experienced with the grease traps and/or whenever a grease trap needs to be serviced. Problems are indicated by wastewater back-ups, reduced wastewater flow rates, and a foul smell coming from the drain area. Facilities should never continuously run hot water to flush the grease trap.

6. Ensure grease traps will be skimmed and/or pumped out as needed. Grease traps will be pumped out as required to prevent overflows, wastewater system blockages, and excessive biological and chemical oxygen demands on the system. Complete cleaning of grease traps should include removal of all grease caps, liquids, and solids. The sides should be scraped or hosed down and the traps refilled with water. All contractors who pump out grease traps aboard the Installation must possess a permit to operate a Septage Land Application Site.

(2) Head, Design Branch, Public Works Division (PWD) shall: Be responsible for the design specifications of all existing and new grease traps. Designs should be consistent with all current United States Environmental Protection Agency, North Carolina Department of Environment and Natural Resources (NCDENR), DON, and USMC rules and regulations.

(3) Director, EMD shall:

(a) Serve as the program coordinator and have control over policy matters and serve as a general point of contact for regulatory site visits and inspections.

(b) Initiate and maintain the residential FOG education program, in conjunction with Base Housing, aboard the Installation.

(c) Disseminate educational information annually (at a minimum) to all Installation residents via an informational flyer or local newspaper article.

1. This information will also be posted on a publicly accessible website.

2. This information will explain the proper method of grease maintenance and disposal.

3. If grease loading of the wastewater system continues to be an issue, the program will be modified to provide more frequent distribution.

(4) Officer-in-Charge of Construction shall:

(a) Ensure all applicable Installation construction contracts include provisions for the proper design and installation of grease traps. These will be managed in accordance with applicable regulations and in accordance with all Federal and state regulations.

(b) Inspect all applicable facilities during construction, or renovation to ensure compliance with the Grease Control Program.

(c) Ensure the EMD is informed of incidents which are likely to result in violations of environmental or public health regulations or standards.

(5) Facilities Support Contracts Office shall:

(a) Ensure all Installation maintenance and cleaning contracts include provisions for the proper procedure for FOG disposal.

(b) Ensure all cleaning contract specifications include language that prohibits the removal of soil strainers from and the disposal of any solid waste into the wastewater system.

(6) All Organizations and Individuals served by the Installation's Wastewater Treatment Plant shall:

(a) Remain informed and support the requirements in the Grease Control Program.

(b) Submit all proposed actions with the potential to impact the environment to the installation Environmental Impact Working Group for the appropriate level of review/approval, in accordance with reference (b).

(c) Deliver any required grease bulletins in accordance with guidance provided by the EMD, MCIEAST-MCB CAMLEJ.

(d) Report grease problems and violations to the Installation's utilities director, PWD, G-F.

(7) Non-Residential Food Preparation Facility Supervisors shall:

(a) Be ultimately responsible for the implementation of this Order.

(b) Ensure no facility employees or support staff knowingly disposes of FOG into the wastewater system.

(c) Ensure a FOG management and training plan is implemented.

(d) Ensure all detergents and cleaning product types and quantities are approved by PWO.

(e) Ensure the facility does not discharge or dispose of the rendering tank contents. It is the responsibility of the facility's supervisor to notify an approved rendering tank contractor when the container is half-full. Supervisors must notify Base Food Services or the Defense Property Disposal Office (when applicable), if a contractor is not available to empty the rendering tank contents in a timely manner.

(f) Notify the PWO if there is any change in water use within a facility, which might impact compliance with this program, or if the user identifies any deficiency with an existing grease trap. If this is not possible, the chain of command is responsible for the facility. Ultimately, a work order should be submitted or an emergency service call made to correct the deficiency.

(g) Provide notice of all planned heavy water and/or FOG events. At a minimum, food service facilities must post hood cleaning and special event schedules so that supporting maintenance contractors

can adjust the amount of biological agents and/or enzymes in the system.

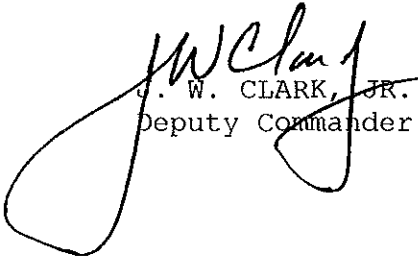
(h) Inspect grease traps at least once every 90 days.

5. Administrative and Logistics. Not applicable.

6. Command and Signal

a. Command. This Order is applicable to MCB CAMLEJ, MCAS New River, its subordinate commands, and all tenant commands, contractors, and staff sections aboard these installations.

b. Signal. This Order is effective the date signed.



J. W. CLARK, JR.
Deputy Commander

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